

CRUISE REPORT

F.R.S. "CLUPEA"

May 8th - 20th, 1961

May 22nd - June 3rd, 1961

Objectives

May 8th - 20th            Moray Firth trawl survey for 0 and 1 Group herring.

May 22nd - June 3rd    Vertical migration and behaviour studies.

General

Because of the replacement of the propeller shaft, "Clupea" was not available until May 11th. Six stations of the Moray Firth Survey were completed in the next two days, when it was found that the propeller shaft was again heating. Further inspection and repairs prevented work in the subsequent week (May 15th and 20th). It was then decided that the week, May 22nd - 27th, should be used to complete the survey and that the week, May 29th - June 3rd, should be used for behaviour studies. Only 11 stations were completed when further shaft trouble necessitated the ship returning to harbour for tests and repairs. This meant that no further work could be done on this cruise.

Results

Total catches ranged from  $\frac{1}{2}$  - 8 baskets for a <sup>1/2</sup> hour haul. The greatest number of herring caught was 7 baskets at station 11. Otherwise herring were very scarce over the whole area sampled. The size ranged from 12 - 23 cm. All species were treated according to Standing Instructions. In addition, Gadus esmarkii were kept for Mr. Raitt and cod for Dr. Rae. A high percentage of the cod were found to be infested with nematodes. During the survey one anchovy was caught.

Hydrographic observations were made at each station, and a haul made with the Gulf III sampler. Drift bottles were also released. The results of this work are not yet to hand.

D. P. Sharman

J. H. S. Blaxter

28th June, 1961